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## THE MONGOLS

IN HUMAN HISTORY the ocean was sometimes an insuperable obstacle to contact between remote peoples, while at other times the vast stretches of land were more of a barrier. What the sailing ships achieved in transport on the ocean, the horses achieved on at least one landmass. They slowly converted into a rough highway that wide transcontinental corridor of east-west grassland and mountain separating the contrasting civilizations of eastern Asia and the Mediterranean. It was to become an axiom of naval historians that whoever commanded the sea commanded the world. Likewise it could have been said that whoever commanded the steppes sometimes commanded the civilizations which stood at each end of them.

Occasionally the people of the steppes burst like a rocket upon the civilized worlds at each end of the corridor. Several of their victories were remarkable. A westerly group, the Huns, stormed west and made the dying Roman Empire quake with fear. Nearly 1,000 years later another group, the Mongols, combining bravery and cruelty and a touch of genius, conquered the largest territory ever held by one ruler up to that time.

The Mongols' early homeland lay well to the north of the silk route. Some believe they probably lived near Lake Baikal, on the borders of eastern Siberia and what is now the Mongolian People's Republic. In about



not even settled peoples. In about AD 1000, the areas occupied by those peoples later called Mongols included the high plateau of the present nation of Mongolia. Indeed the average height of the lands forming that nation is about 1.5 kilometers above sea level. The snow-topped Altai Mountains stand to the southwest, but are not continuous enough to form a barrier debarring nomadic peoples from following west the long corridor of pastureland extending to Ukraine and the plains of Poland.

The families traditionally inhabiting these Mongolian steppes moved their livestock from pasture to pasture according to the changing seasons. They owned the sheep, goats, cattle and horses but the land itself was owned collectively by larger groups. Hardly a fence or enclosure was to be seen, but these skilled riders knew exactly the summer pastures on which they alone were entitled to graze their flocks and herds, and the wells from which they could pull up water. When the time came to move camp to summer or winter quarters, the oxen usually pulled the cart on which the heavy woollen tents were loaded. Possessing no large towns, their population in total was small.

The animals were their capital, their main source of wealth. Reluctant to eat into their capital, the Mongols preferred as much as possible to live off the dividends which came in the stream of milk. From the milk of their cows, sheep and goats they made butter, at least four varieties of cheese, the yoghurt now so popular in the west, a dried cream called *urum*, and a distilled liquor called *airak*. Even the hardy fast-galloping mares yielded their milk, which, fermented, was drunk with relish. In the grasslands and forests a few edible roots and grains were collected in season, and of course they hunted marmots, wolves, squirrels, steppe foxes and other wild animals, whose fur they prized.

In a normal winter the Mongols' herds and flocks survived even though no hay was stored for their benefit. They fed on the dry brown grass which lay beneath the ice and snow. Sometimes a herd of horses was driven deliberately through these white pastures so that their hooves broke the surface ice, allowing other livestock to find the dry grass below.

At first sight it was not an environment which would equip a people, few in number, for the task of toppling proud and populous civilizations.

competent as managers when the men were away on fighting or raiding expeditions; and indeed the women had a status which surprised many Chinese. In some ways the Mongols could be compared with the Vikings, who flourished a little earlier. What one people did at sea the other did on land. Both came from a harsh climate and thinly peopled territory, which is not necessarily an advantage but becomes one if, next door, lives a rich and populous empire which grows complacent and a little flabby.

## THE MONGOLS ARE COMING!

Every shrewd emperor of China saw advantages in enticing the nomads to fight amongst themselves. In the 12th century they were as divided as they were to be united in the following century. In 1206, however, Genghis Khan, the chieftain of the Mongols, miraculously united these riders of the steppes. All clans or groups gave him loyalty: he had already killed or cowed those most likely to be disloyal. A magnetic leader, he was said by some to possess the mystical powers of the *shaman*, a kind of soothsayer revered by the pagan Mongols. With a mounted army of close to 130,000 men, his own genius in strategy and tactics, and a network of spies in enemy territory, he began to conquer. Thousands of his cavalrymen rode with a spare horse or two by their side so they could replace a tired horse if a long journey lay ahead.

Genghis Khan moved so quickly that surprise was often his weapon. He occasionally used the new invention of gunpowder if he had to besiege a fortified town. Often he offered a city the chance to surrender. The price of surrender was one in every ten of the city's people and one-tenth of its wealth; and so his slaves and conscripted soldiers and wealth multiplied. Cities that did not surrender were besieged or stormed. Massacre and butchery were the Mongols' trademark. They became so feared that they often found themselves pursuing the backs of the enemy.

Ruthless but intelligent vandalism was another of their weapons. They would destroy the irrigation systems that were the lifeline of many farmlands or lay waste to the land surrounding a besieged city so that its roadsides and fields were strewn with corpses. When advancing towards the walls of a well-defended city the Mongols would sometimes compel their prisoners of war to go ahead of them and form a human shield. And



people.

Enlisting more allies, recruiting or conscripting foreign soldiers, they more than replaced the men they lost through death, wounds or disease. The momentum of the simultaneous advance across Asia, both to east and to west, was terrifying to the people of cities who, thinking the Mongols were far away, suddenly saw them appear on the nearby hilltops.

China surely could halt them. At times its regular army consisted of more than 1,000,000 soldiers, and its output of suits of armor and weapons was prodigious. But inside China there was periodically a tussle between the generals, who sometimes amassed regional armies and took control, and the mandarins or bureaucrats who were close to the emperor. The mandarins were tight-knit: at about the time of the Mongols' invasion, four out of every 10 new members of the civil service were sons or grandsons of former civil servants or mandarins. As the mandarins handled the collecting of taxes and much of the administration, they treated the army less generously. So indirectly they weakened China's ability to defend itself.

The Great Wall of China could perhaps keep out the Mongols. It was a magnificent achievement in architecture and stonemasonry; but the extent of the wall's vulnerability can be measured by a fact not widely known in the west. During a span of 1,525 years, extending until almost the eve of the First World War, four of China's long-lasting dynasties were not created by the mainstream Han Chinese. Either they were of barbarian origin or were founded by ethnic minorities who lived on the inland fringes of northern and western China. The Great Wall was virtually of silk as well as stone, wonderful to see, impressive in its artistry, but easy to overcome. The vast region around Peking (Beijing) experienced, in the 800 years before the fall of the last Chinese emperor, a ratio of about one year of rule by a homegrown Han Chinese dynasty to two years of rule by groups reared on the outer side of the Great Wall: the Ming dynasty was the exception. Armed horsemen had simply leaped over the Great Wall. Nonetheless there remained a surprising continuity in Chinese history. What provided continuity was the well-schooled and distinctive mandarin bureaucracy.

The Great Wall of China was merely another hurdle for the Mongols to overcome. They captured Peking in 1215 and eventually made it the capital of China. To the south lay a huge area of country still in Chi-





most advanced nation in the world materially, was almost the equivalent of a central African nation today occupying the United States and replacing Washington as capital. In contemplating the Mongols, one conclusion is beyond dispute. There had been no conquest like it in recorded history.

At the other end of Asia the Mongols were almost as remarkable. They captured a succession of Islamic cities that had felt secure behind their high walls. In Ukraine in 1224—three years before the death of Genghis Khan—the Mongol cavalry were approaching the Christian city of Kiev. It did not fall quickly, but 16 years later it was captured. Even Baghdad fell to the Mongols. By the end of the 13th century the Mongol Empire stretched from the banks of the Danube to the fishing villages of Hong Kong.

While Genghis Khan achieved in less than 20 years what the Romans as conquerors had taken centuries to achieve, the two conquests cannot easily be compared. The Mongols, when advancing west of China, easily fought their way across a vast expanse of Asia holding few people. Their main targets were walled cities, crucial river crossings and mountain passes which had to be won at all costs. In effect they had to capture a scatter of small dots or islands in a vast sea. But when eventually they had to try to subjugate the Southern Sung dynasty which controlled the center and south of China, their task was probably harder than any accomplished by Roman soldiers in a short time. One of their targets was the rich and well-defended city of Hangchow (now Hangzhou), the largest city in the world and the home of close to one million people. The Mongols captured it.

It may well be that the winning of an empire is more easily accomplished on land than on sea. The victories of Genghis Khan and Alexander the Great over a huge area of land, and even the main victories of Napoleon and Hitler, were aided by the fact that they did not primarily have to cope with the temperamental sea. A substantial seafaring city or kingdom was not so easily conquered. The sea was often its ally. When a huge enemy navy appeared in sight, all was not lost. Local knowledge was a vital asset to the defender. An invading fleet, riding the waves or anchoring off a coast which offered no sheltering harbor and winds which were unfamiliar, was highly vulnerable.

Thus the mighty Persian empire, a land empire facing the small but

rising republic of Athens, had suffered crucial defeats in the fifth century BC when its navy was twice hit by storms in the Mediterranean. Likewise in the 13th century the Mongols built an imposing fleet and actually landed troops on the Japanese coast, but were thwarted by the sea. In 1274 they lost 15,000 troops and sailors at sea. Seven years later a typhoon thwarted their attempted invasion. In the 16th century the Spanish, eager to invade Britain, were defeated more by storms at sea than by the enemy's navy. Later the English Channel proved one of the toughest enemies for Napoleon and then for Hitler. The sea tended to favor the defender. Thus if the cities of Samarkand and Peking, Herat and Kiev had been on the coast and not in the interior, and had to face the rampaging Mongols who arrived in fleets, they might have defended themselves with more success. To make such a comment is to place a land invasion in perspective and not to rob the Mongols of their glory.

The Mongols were fighters rather than administrators. They were more brilliant at winning an empire than at governing it and retaining it, though the Golden Horde did rule the south of Russia for two centuries. One of the Mongols' first achievements was to bring law and order to the long silk road: never before had it been under the control of one ruler. They even built new cuttings in high ground and a bridge here or there, with staging camps and simple hostels along the way where merchants, their servants and pack animals could camp for the night. All kinds of caravans came through, and it is recorded that between 1366 and 1397 the slave market in the Italian city of Florence sold 257 slaves, mostly young women, who had been brought along that road.

The safety of the road became a legend. It was said that travellers could even journey by night, presumably when the full moon was shining. A maiden travelling alone and "bearing a nugget of gold," it was said, could traverse the road with safety; and if she did not turn up at a staging post when expected, a search would be made for her. Ironically the road, busier than ever, was not quite so important to Europe, for its own silkworm farmers were now flourishing in the shade of the mulberry groves. Moreover the sea route to Chinese ports from the Middle East and India was now competing strongly with the overland caravans.





## THE WANING OF CHINA'S

### SCIENTIFIC STAR

A beehive of inventiveness, China still had much to teach the west. It had probably the most skilled farmers in the world even though some regions were backward. New breeds of rice were found by experiment, including one that resisted drought and an early-maturing rice that enabled an additional crop to be planted each year. The war against agricultural pests was ingenious. Likewise certain plants were burned to create thick smoke and so fumigate an area where insects were a pest. The wild chrysanthemum was burned and the ashes sprinkled on ponds to silence frogs that were croaking too noisily. Locusts, capable of causing famine when they attacked ripe crops, also attracted the problem-solvers; and live ducks were put in baskets and carried by laborers to the breeding spots of the locusts.

In the art of communicating, the most momentous event since the invention of writing was slowly beginning in China. Paper was being manufactured and the art of printing, using signs cut into wooden blocks, was being improved. Their oldest book dates from 868. The printing of a book instead of writing it out by hand was a wonderful opportunity to spread the message of Buddhism and also the precepts of Confucius, which every candidate for the civil service had to know. Long before a printed book was ever read in Rome, the Chinese were producing print runs which even today would be viewed as respectable. In 1273 a handbook for farmers and growers of raw silk was printed, and soon 3,000 copies were in circulation at a time when in Italy the same task would have called for a monastery full of monks to give up a whole year in order to write out the copies by hand.

In designing waterways the Chinese were masters. Whereas the Romans had been the masters of the aqueduct or elevated stone canal that conveyed freshwater to the cities, the Chinese were masters of the boat canal that crossed uneven terrain. China's Grand Canal, like its Great Wall, was built over many centuries. A Japanese monk visiting China in AD 838 was astonished to see a convoy of barges slowly sailing along the canal, with some of the barges lashed together so that they sailed three abreast, and the whole convoy being dragged by two water buffalo plod-

ding along the bank. The canal carried grain from the farmlands, especially around the Yangtze River, to feed large cities.

As China possessed in abundance the three ingredients of gunpowder—sulphur, saltpeter and charcoal—it is not surprising that it discovered this explosive. A Chinese work of 1044 contains three different recipes for making military gunpowder, and almost certainly it was used from time to time in the following century. The Mongols themselves experienced gunpowder after they attacked the big city of Kaifeng in central China in 1232. A container of gunpowder was attached to a missile or lance, which was in turn hurled at the enemy. Called "the flying fire lance," it was more promising than devastating. When a firearm with a metal barrel was invented for the firing of the fire-missile, warfare would not be the same again.

On the cramped beach in the Italian holiday resort of Amalfi, once one of the foremost ports of the Mediterranean (its coat of arms is still on the Italian maritime flag), is a statue of an Italian said to have invented the compass. China, however, was almost certainly the inventor of that great instrument of exploration. It also invented the rod-and-bead abacus, which was a fine instrument for calculating before the invention of the present pocket calculator.

Several techniques for the building and sailing of ships almost certainly came from China, though some were used more effectively, and improved upon, in western Europe. From China came the spinning wheel driven by the action of the foot and a hemp-spinning machine driven by running water. Suspension bridges made of iron chains were built in China long before England made its famous iron bridge early in the industrial revolution. Five years before the arrival in England of William the Conqueror, a pagoda was made of cast iron in Hubei province: it still stands. In 1400 an observer with the gift of acute foresight might have thought that China was rushing, ahead of England, towards the world's first industrial revolution; but soon the rush was to slow down to a crawl. <sup>1870</sup>

In medicine and health the Chinese were vigorous in trying new remedies but also tenacious in clinging to old remedies, especially in herbal medicine, which was probably the main avenue of healing. Many of the Chinese used toothpaste and a cleaning brush—items unknown in Europe. Chinese physicians glimpsed the hazardous diseases which sur-

*Ch. used toothbrush*



rounded certain occupations—how the sharp dust raised by the drilling of holes in the underground mines weakened the lungs of the miners, how silversmiths inhaled the mercury they used in their craft, and how the cooks who constantly inspected the fire burning in their pastry ovens slowly impaired their own eyesight. In anatomy, too, Chinese scholars made advances. Whereas the Arabs, to the fore in many branches of science, were prevented by their Islamic religion from dissecting a corpse and so examining the human body, some Chinese experimenters felt no such inhibition. In the year 1045 they decided to use 56 political prisoners as guinea pigs. A slit was made in their heaving stomachs and their bodies, still breathing, were examined.

Liberty in China, as almost everywhere, was rationed. Even in AD 1200 several million Chinese were slaves. Some had been captured in war and enslaved; many were hereditary slaves presented as gifts to the Buddhist monasteries where they worked for the remainder of their life. Others were children or even adults who had been sold into slavery by a starving family. The largest owner of slaves was the imperial family, and 10,000 slaves could easily belong to one royal owner.

Chinese courts used enslavement as a penalty for certain offenses. The normal punishment of a murderer was prompt. He was executed, his family was enslaved, and his property was confiscated, six-tenths of it going to the family of the victim. When the Jurchens took over northern China in the 1200s they introduced a loophole. If a murderer could afford to compensate the family of the victim with livestock and other wealth, he avoided the death penalty and instead submitted to the cutting off of his ears or nose. This was in effect his convict insignia, engraved permanently on his face, though he was now a free man.

## CHINA'S BLIND SPOT

The Chinese were on the verge of various impressive breakthroughs, but often they remained on the verge and stepped no closer. While many of their clever experiments were successful, few penetrated the entire country and eased the daily labors of the diligent workforce that worked its heart out seven days a week, year after year. And yet China was well ahead of Europe in its applied ingenuity in the thousand years before 1400.

The misfortune for the Chinese was that, having led for long in many branches of technology, they were hot and cold, inventive and

retardant, in that one technique which proved to be the gateway to the future, they failed at sea. True, they invented the compass, but they had intense desire to sail into the unknown. They were skilled makers of maps but their best maps were of their own small-scale farming districts. A man of the globe was of little interest to them, for they believed that the fer plains of China were the center of the earth, an oriental Garden of Eden and that everything far from those plains was of lesser importance.

Chinese scientists still believed that the earth was flat with a definite rim long after that comforting idea had disappeared in Europe. They could see no point in the tantalizing theory—increasingly held in Europe—that by travelling west rather than east, a European ship would eventually reach China. For Chinese navigators in 1492, the corollary to that idea was that, by sailing east, they would eventually reach western Europe. If the Chinese had held that idea, their big ships might have gone forth and discovered the west coast of the Americas long before the east coast was found by Columbus. But they did not believe the earth was round.

The Chinese showed high skills in the art of shipbuilding. In the years between 1405 and 1430, their admiral Zheng He supervised major voyages in large ships to distant lands. His Chinese fleet, when exploring far from home, mostly visited ports in Asia and the Indian Ocean which were well known to those sea captains who visited Chinese ports for commerce. Whether it could be called exploration in the Columbus spirit is dubious, and in any case the voyages ceased. Even Chinese merchants did not travel abroad. Already coastal shipping was curtailed in China; and the widened Grand Canal, reopened in 1411, was used rather than the sea coast for north-south transport. Remarkably, the Chinese shunned the sea, on which they were experts, at the very time when western Europe was embarking on distant oceans with startling results.

\* Chinese tech. & inventions emerging — compass, paper & printing, water clocks, gunpowder  
 but failed @ sea → no drive to explore  
 diff. Euro.s eclipsed in 1400s

